

OpenGL[®] Programming Guide

Eighth Edition

*The Official Guide to Learning
OpenGL[®], Version 4.3*



Dave Shreiner • Graham Sellers • John Kessenich • Bill Licea-Kane

The Khronos OpenGL ARB Working Group

Praise for *OpenGL® Programming Guide, Eighth Edition*

“Wow! This book is basically one-stop shopping for OpenGL information. It is the kind of book that I will be reaching for a lot. Thanks to Dave, Graham, John, and Bill for an amazing effort.”

—Mike Bailey, professor, Oregon State University

“The most recent Red Book parallels the grand tradition of OpenGL; continuous evolution towards ever-greater power and efficiency. The eighth edition contains up-to-the minute information about the latest standard and new features, along with a solid grounding in modern OpenGL techniques that will work anywhere. The Red Book continues to be an essential reference for all new employees at my simulation company. What else can be said about this essential guide? I laughed, I cried, it was much better than *Cats*—I’ll read it again and again.”

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“If you are looking for the definitive guide to programming with the very latest version of OpenGL, look no further. The authors of this book have been deeply involved in the creation of OpenGL 4.3, and everything you need to know about the cutting edge of this industry-leading API is laid out here in a clear, logical, and insightful manner.”

—Neil Trevett, president, Khronos Group

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OpenGL[®] Programming Guide Eighth Edition

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The OpenGL graphics system is a software interface to graphics hardware. (“GL” stands for “Graphics Library.”) It allows you to create interactive programs that produce color images of moving, three-dimensional objects. With OpenGL, you can control computer-graphics technology to produce realistic pictures, or ones that depart from reality in imaginative ways.

The **OpenGL Series** from Addison-Wesley Professional comprises tutorial and reference books that help programmers gain a practical understanding of OpenGL standards, along with the insight needed to unlock OpenGL’s full potential.

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*For my family—Vicki, Bonnie, Bob, Cookie, Goatee, Phantom, Squiggles,
Tuxedo, and Toby.*
—DRS

To Emily: welcome, we're so glad you're here! Chris and J.: you still rock!
—GJAS

In memory of Phil Karlton, Celeste Fowler, Joan Eslinger, and Ben Cheatham.

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